SAFE Final Rule: OTAQ Review of the Preamble Submitted to OMB

Briefing for Acting AA Idsal

January 30, 2020

Agenda

- Overview
- Status of documents
- OTAQ review of the January 14 submission to OMB
- OTAQ concerns and recommendations
- Next steps

Overview

- OTAQ staff have done a high level review of the nearly 1,000 page SAFE preamble that was submitted to OMB for interagency review on January 14
  - Much of this preamble was new – we had not previously had an opportunity to review -- thus, we have not had the time to do a deep dive review

- OTAQ continues to disagree from a technical standpoint with much of the NHTSA analysis. Simply, this is not EPA's analysis – EPA is relying upon the assessment performed by NHTSA.
  - NHTSA has made many changes to the analysis since the NPRM -- in large part as a result of the limited technical engagement with EPA, and OTAQ's assessment of areas that could improve the defensibility of the rulemaking, which we conducted in the 1st half of 2019
  - There are still many areas where NHTSA chose not to make EPA's recommended changes (e.g., 20% rebound) -- but we are not revisiting those issues in our review
  - We're also discovering new analytical flaws revealed in NHTSA's new write-up

- OTAQ's key concerns with the OMB-review preamble are in the misrepresentation of EPA's technical work and modeling tools
  - Factually incorrect statements, denigration of EPA's past work, and unnecessary conclusions that NHTSA models are "superior"

Status of Documents: What we have seen - Preamble

- The January 14 submission to OMB was an ~1,000 page preamble
  - ~650 pages is new material that OTAQ did not have an opportunity to review prior to OMB submission
- There are many Placeholders throughout, including two key sections:
  - **Section VII: Impacts of the standards**
    - We have not seen draft of the final CO2 modeling results, which have evidently changed from the last results NHTSA shared on Oct. 3, given some values referenced in other sections of the preamble
  - **Section VIII: Statutory Justification of the Standards**
    - EPA's draft of the EPA Justification of CO2 Standards section was provided to NHTSA on Oct. 31, and revised version shared with EPA leadership on Jan. 10.
    - NHTSA shared draft Justification of CAFE Standards section with OGC leadership on Jan. 13. ARLO provided comments to OGC senior leadership on Jan. 16 after consulting with OTAQ.
  - EPA's NGV multiplier write-up is also a placeholder in the Compliance/Flexibilities Section IX.
- OIRA has since sent (Jan. 24) NHTSA's draft additional ~5 pages of preamble (consumer choice modeling) to EPA at same time as interagency reviewers

Status of Documents: What we have not seen – NHTSA Regs, RIA, and EIS

- The Jan. 14 OMB submission did not include the NHTSA or EPA regulations, NHTSA's draft of the Final RIA, or the NHTSA Final EIS

- Regulations
  - EPA's draft regulations are complete, including NGV 2X multiplier, and we shared with OAR leadership on Jan. 22.
  - We have not seen the draft NHTSA regs

- Regulatory Impact Analysis (RIA)
  - We have not seen the draft Final RIA

- NHTSA Final Environmental Impact Statement (EIS)
  - We have not seen NHTSA's draft Final EIS. The sections on air quality impacts, health effects, and climate impacts would be most relevant for EPA's review.

Status of Documents: Response to Comments (RTC)

- We recently learned via OGC conversations that NHTSA no longer plans to have a separate RTC document, contrary to what NHTSA communicated to EPA leadership this past July-Sept.

- Based on the prior direction, OTAQ staff, with OGC review, spent more than a month developing our sections of the RTC – consistent with how EPA traditionally prepares an RTC document -- and that work is mostly done.

- EPA's RTC includes comment excerpts and responses to issues including EPA flexibilities, fuel octane, air conditioning credits, methane/nitrous oxide, and others.

- OTAQ plans to send the EPA RTC to NHTSA

OTAQ Review of the Jan. 14 OMB Preamble

- OTAQ has done a high level review, but the volume of new text and timeline did not allow for a deep dive

- OTAQ review falls into 3 categories:
  1) Material we previously reviewed and provided NHTSA comments on
  2) Material we previously received from NHTSA but had not yet commented on
  3) New material EPA had not previously seen (later slides)

Category 1: Material we previously reviewed and provided NHTSA comments on

- Many of our previous comments were not incorporated in the OMB submission, including several errors which remain uncorrected
  - Examples of errors include Regulatory Alternatives -- the draft does not finalize 1.5%/year CO2 standards, it is less stringent; the draft says we are not changing the off-cycle program, but we are.
  - Other examples include technical corrections to sections on social cost of carbon and various technology inputs.

Category 2: Material we previously received from NHTSA but had not yet commented on

- EPA review of several sections was still underway when NHTSA submitted the preamble to OMB
  - Examples: Compliance section (which now includes EPA's NGV multiplier text) includes numerous descriptions of EPA's GHG program flexibilities that are wrong; technical comments on VMT methodology and technology effectiveness; OGC legal comments on CAA references in civil penalties section.

- OTAQ's comments for Categories 1 & 2 are ready to go, and could be sent to NHTSA at any time

OTAQ Review: New material

Category 3: New material we had not previously seen

- ~650 pages of text, including detailed responses to comments
  - Example new sections include analytical approaches, changes from the NPRM and 2012 rule, many technology inputs, simulating economic factors (sales, scrappage), and fatality/safety analysis
- It is clear that NHTSA's modeling results have changed since the last set EPA received on October 3, as the preamble includes different values
  - This means the EPA write-up on the justification of the standards cites well over 100 values which are wrong and needs to be updated. Note that we do not have the most recent version of the NHTSA model or the results needed to update the EPA justification section.
- OTAQ's concerns fall into 3 main areas, detailed on following slides:
  - Factually incorrect statements and errors, including false statements about EPA's technical work
  - NHTSA-drafted text, in EPA's voice, denigrating EPA's technical work
  - NHTSA-drafted text concluding, in EPA's voice, that EPA has decided the NHTSA models are "superior" to EPA models

OTAQ Concerns

- Factually incorrect statements & errors examples:
  - Incorrect CO2 standards – less than 1.5%/year stringency
  - False statements about how EPA's vehicle simulation models work
  - False statements about the EPA powertrain benchmarking testing and engine maps
  - False statements about Tier 2 and Tier 3 certification fuel

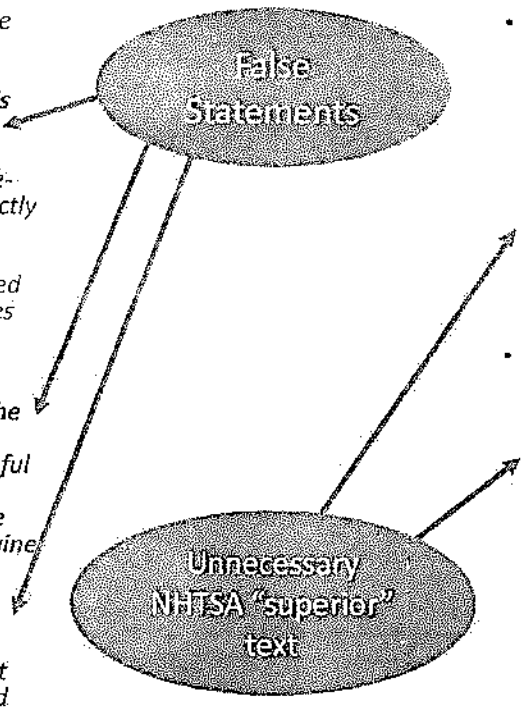
- For each false statement we have identified, EPA can provide technical citations, including published literature, correcting the factual inaccuracy

- The approach of denigrating EPA's work is in conflict with the NPRM and with how EPA senior leadership had communicated its decision to rely on one set of modeling tools for the rulemaking (see slide 11)

Example Problematic Preamble Text

NHTSA's draft preamble contains false statements regarding EPA models & technical work

- *"As discussed in more detail below, although Autonomie and ALPHA are both models that perform full vehicle simulation, the ALPHA model **does not currently have Autonomie's large-scale simulation capabilities, and is unable to perform a full parametric study of effectiveness estimates with every individual vehicle technology being investigated**. Again, the use of large-scale modeling and simulation minimizes errors by directly evaluating effectiveness of each technology and combination of technologies. This ALPHA limitation necessitates the use of a tool that is trained using limited ALPHA data to provide approximate effectiveness values for the wide range of technology combinations."*
- *"Specifically, **when EPA benchmarks vehicles like the 2018 Toyota Camry, the resulting fuel map captures the benefits of many technologies associated with that vehicle, and not just the engine.** This data can be helpful when developing controls and validating component operations in modeling, **but it is inaccurate to conclude the fuel consumption is directly related to specific engine technologies."***
- *"For reference, **ALPHA uses a fixed shift map to decide upshift and downshift events,** and Autonomie uses validated algorithms developed from dynamometer test data that adapts the shifting map to specific engine and transmission combinations to maximize fuel efficiency while maintaining drive quality."*



NHTSA unnecessarily concludes, for EPA, that EPA has decided that the NHTSA models are "technically superior" to EPA models

- *"Given the above, the only remaining argument for EPA to revert to its previously-developed models rather than relying on Autonomie and the CAFE model would be that the former are so technically superior to the latter that even model refinements and input changes cannot lead Autonomie and the CAFE model to produce appropriate and reasonable results for CO_2 rulemaking analysis. **As discussed below, having considered a wide range of technical differences, the agencies find that for this joint CAFE and tailpipe CO_2 emissions rulemaking analysis, the Autonomie and the CAFE models provide the best analytical combination."***
- *"The agencies have carefully considered these comments, refined various specific technical aspects of the CAFE model (like the "effective cost" metric mentioned above), and have also updated inputs to both Autonomie and the CAFE model. Especially given these refinements and updates, **EPA maintains that for CO_2 rulemaking analysis, Autonomie and the CAFE model are technically superior to EPA's ALPHA and OMEGA models.** Therefore, having the discretion to select among available methods for conducting rulemaking analysis, and recognizing that models inform but do not make regulatory decisions, EPA has elected to rely solely on the Autonomie and CAFE models to produce today's analysis of regulatory alternatives for CO_2 standards."*

Background on EPA leadership decision to use NHTSA models

- Basis for EPA's Decision
  - During November 2017 – January 2018, OTAQ gave at least 4 detailed technical briefings and a hands-on lab demonstration to former AA Wehrum on EPA's modeling tools and technical work.
  - In mid-January 2018, the EPA leadership informed OTAQ that the Administrator decided that we would use one set of modeling tools for the upcoming rulemaking – the CAFE model.
  - AA Wehrum communicated that he and the Administrator simply thought it made sense for the two agencies to work together on a single model for the underlying analysis -- that it was not the "brand name of the calculator" that is important, but ensuring that the calculator is well designed and that the calculator has good input data.
  - AA Wehrum directed us to work with NHTSA to help ensure that the CAFE model was a good calculator and had the best available data for making decisions, which is what we then spent the rest of January – June 2018 trying to do for the proposal.
  - Not once did the EPA leadership communicate that they thought the NHTSA model, tools, or data was "superior" to the EPA tools.

- NPRM language on why agencies chose to use NHTSA models – not "superior", but rather:
  - The agencies have determined that it is **"reasonable and appropriate"** to use NHTSA models
  - EPA interprets CAA 202(a) as giving the agency **broad discretion** in how it develops and sets GHG standards. Nothing in CAA mandates the use of a specific model.
  - CAFE model provides a **transparent and realistic basis** to estimate impacts

NHTSA Final Rule Assessment "Superior" to EPA Models/Data?

- NHTSA writes repeatedly that the NHTSA models/tools/data are "superior" to the past EPA models/tools/data
- Yet it is the NHTSA analysis which fluctuated wildly between proposal and final:
  - Costs per vehicle dropped by ~ 50%
  - Net benefits changed by $255 Billion – and from positive to negative
- NHTSA's assessment for the NPRM was clearly wrong, and the major bases for the Administrator's 0%/year proposal have largely disappeared (mainly safety).
- OTAQ disagrees that NHTSA's models/tools/data are superior to EPA's – ultimately now for the FRM (after significant corrections to the NPRM CAFE analysis) the NHTSA and EPA models lead to directionally similar conclusions

	EPA Assessments		NHTSA Assessments	
	2017 Final Determination	Jan. 2018 OAR Briefing	SAFE NPRM	SAFE FRM
$/vehicle cost increase	$875* [$800 - $1,115]	$935* [$903 - $1,190]	$2,260**	$1,275**
Net Benefits (3% DR)	$98 Billion***	n/a	-$200B	+55B

Directionally Similar Conclusions

Notes
* Costs to meet 2025 augural in 2025; ** Cost to meet 2025 augural stds. in 2030; *** EPA assessments for MY2021-2025 vehicles, NHTSA Assessments for MY 1977-2029 vehicles

OTAQ Recommendations for EPA Comments on the OMB-Review Preamble

1. Correct the errors and factual inaccuracies

2. Remove the unnecessary denigration of EPA's technical work

3. Revert to the NPRM language on why EPA chose to use NHTSA models – not "superior," but "reasonable and appropriate"

4. As an alternative, we could provide comments that put decisions made about the analysis in NHTSA's voice alone, making clear this is not EPA's analysis
   - Add text explaining that the EPA Administrator has discretion to rely on whatever data/analysis he believes is most appropriate, and he has chosen to rely on the NHTSA analysis for decisions supporting the final CO2 standards.

Next steps

- Timing: OTAQ would benefit from another ~week to incorporate our high level comments into the OMB-review preamble, along the lines recommended on previous slide

- Interagency comments